

THAT WHICH IS CLAIMED:

1. A multicomponent fiber, comprising:
a non-luminescent first polymeric component; and
a second polymeric component comprising at least one luminescent colorant;
wherein the second polymeric component comprises less than about 50 percent of
the cross-sectional area of the multicomponent fiber.
2. The multicomponent fiber of Claim 1, wherein the luminescent colorant
comprises a colorant selected from the group consisting of fluorescent colorants,
phosphorescent colorants, and mixtures thereof.
3. The multicomponent fiber of Claim 1, wherein the luminescent colorant is
a pigment.
4. The multicomponent fiber of Claim 1, wherein the luminescent colorant is
a photoluminescent colorant.
5. The multicomponent fiber of Claim 1, wherein the luminescent colorant is
present in an amount of from about 0.01 percent by weight to about 20 percent by weight
based on the total weight of the fiber.
6. The multicomponent fiber of Claim 1, wherein the luminescent colorant is
a phosphorescent colorant and is present in an amount of about 1 percent by weight to
about 15 percent by weight based on the total weight of the fiber.
7. The multicomponent fiber of Claim 1, wherein the luminescent colorant is
a phosphorescent colorant and is present in an amount of about 5 percent by weight to
about 15 percent by weight based on the total weight of the fiber.
8. The multicomponent fiber of Claim 1, wherein the luminescent colorant is
a fluorescent colorant and is present in an amount of about 0.05 percent by weight to
about 2.5 percent by weight based on the total weight of the fiber.

9. The multicomponent fiber of Claim 1, wherein the luminescent colorant is a fluorescent colorant and is present in an amount of about 0.1 percent by weight to about 1 percent by weight based on the total weight of the fiber.

10. The multicomponent fiber of Claim 1, wherein the second polymeric component comprises less than about 35 percent of the cross-sectional area of the multicomponent fiber.

11. The multicomponent fiber of Claim 1, wherein said first and second polymeric components are each independently selected from the group consisting of polyolefins, polyesters, polyamides, polyacrylates, polystyrenes, polyurethanes, acetal resins, polyethylene vinyl alcohol, thermoplastic elastomers, polyacrylonitrile, polyaramids, cellulose and cellulose derivatives, and blends and co- and terpolymers thereof.

12. The multicomponent fiber of Claim 1, wherein said first polymeric component and said second polymeric component comprise the same polymer.

13. The multicomponent fiber of Claim 12, wherein both of said first polymeric component and said second polymeric component comprises a polyamide polymer.

14. The multicomponent fiber of Claim 13, wherein both of said first polymeric component and said second polymeric component comprises a polyamide polymer selected from the group consisting of nylon 6 and nylon 6,6.

15. The multicomponent fiber of Claim 12, wherein both of said first polymeric component and said second polymeric component comprises an aromatic polyester polymer.

16. The multicomponent fiber of Claim 15, wherein both of said first polymeric component and said second polymeric component comprises polyethylene terephthalate.

17. The multicomponent fiber of Claim 12, wherein both of said first polymeric component and said second polymeric component comprises an aliphatic polyester polymer.

18. The multicomponent fiber of Claim 17, wherein both of said first polymeric component and said second polymeric component comprises polylactic acid.

19. The multicomponent fiber of Claim 12, wherein both of said first polymeric component and said second polymeric component comprises a polyolefin polymer.

20. The multicomponent fiber of Claim 19, wherein both of said first polymeric component and said second polymeric component comprises polypropylene.

21. The multicomponent fiber of Claim 1, wherein the second polymeric component comprises a phosphorescent colorant.

22. The multicomponent fiber of Claim 21, wherein said phosphorescent colorant is selected from the group consisting of metal aluminate oxide, sulfides of zinc, calcium, strontium and cadmium, and complex sulfides of zinc and cadmium sulfide.

23. The multicomponent fiber of Claim 21, wherein said phosphorescent colorant is metal aluminate oxide, zinc sulfide or strontium sulfide.

24. The multicomponent fiber of Claim 1, wherein said second polymeric component comprises a fluorescent colorant.

25. The multicomponent fiber of Claim 1, wherein said fiber is a bicomponent sheath and core fiber, wherein said sheath comprises the non-luminescent first polymeric component and the core comprises the second polymeric component.

26. The multicomponent fiber of Claim 25, wherein the core is concentrically located within the sheath.

27. The multicomponent fiber of Claim 25, wherein the core is eccentrically located within the sheath.

28. The multicomponent fiber of Claim 1, wherein said fiber is a bicomponent matrix fiber comprising a plurality of inner fibers and a matrix component surrounding the inner fibers, the inner fibers comprising the second polymeric component and the matrix component comprising the non-luminescent first polymeric component.

29. The multicomponent fiber of Claim 1, wherein said fiber is a bicomponent fiber wherein the non-luminescent first polymeric component and the second polymer component are arranged side-by-side.

30. The multicomponent fiber of Claim 1, wherein said fiber is selected from the group consisting of continuous filaments, staple fibers, and meltblown fibers.

31. A sheath and core bicomponent fiber, comprising:
a sheath comprising a non-luminescent first polymeric component; and
a core comprising a second polymeric component, the second polymer component comprising at least one fluorescent or phosphorescent colorant;
wherein the core comprises less than about 35 percent of the cross-sectional area of the bicomponent fiber.

32. The bicomponent fiber of Claim 31, wherein the colorant is a phosphorescent colorant and is present in an amount of about 1 percent by weight to about 15 percent by weight based on the total weight of the fiber.

33. The bicomponent fiber of Claim 31, wherein the colorant is a phosphorescent colorant and is present in an amount of about 5 percent by weight to about 15 percent by weight based on the total weight of the fiber.

34. The bicomponent fiber of Claim 31, wherein said first polymeric component and said second polymeric component are formed from the same polymer selected from the group consisting of nylon 6, nylon 6,6, polyethylene terephthalate, polylactic acid, and polypropylene.

35. A fabric comprising a plurality of multicomponent fibers, said multicomponent fibers comprising:
a non-luminescent first polymeric component; and
a second polymeric component comprising at least one luminescent colorant;
wherein the second polymeric component comprises less than about 50 percent of the cross-sectional area of the multicomponent fiber.

36. The fabric of Claim 35, wherein said fabric comprises a fabric selected from the group consisting of woven fabrics, knit fabrics and nonwoven fabrics.

37. An article comprises a plurality of multicomponent fibers, said multicomponent fibers comprising:
a non-luminescent first polymeric component; and
a second polymeric component comprising at least one luminescent colorant;
wherein the second polymeric component comprises less than about 50 percent of the cross-sectional area of the multicomponent fiber.

38. The article of Claim 37, wherein said article is safety apparel.